

THE
CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JANUARY 15, 1869.—No. 2.

ORIGINAL COMMUNICATIONS.

Argentine Albuminuria.

BIOLOGICAL SOCIETY OF PARIS—M. CLAUDE BERNARD, PREST.

Observations upon certain effects of Nitrate of Silver employed as an internal remedy; by Henry Liouville, laureate, etc., etc.

In two communications made successively to the Biological Society in June, 1868, we endeavored to complete one of the reports of a case (of which we presented the pathological specimen) of disseminated sclerosis diagnosed during life by M. Vulpian, at la Salpêtrière.

In this case was discussed the demonstration establishing clearly the long duration of certain effects of the impregnation of certain organs of the economy with nitrate of silver taken internally in pill form, and of certain serious consequences of this action which had not hitherto been noticed.

It is known by experiments and clinical researches (1), of which the last are especially due to MM. Ball, Charcot

(1) Dictionnaire encyclopédique, article *Argent*, par Ball and Charcot, 1867.

and Vulpian (2) *that nitrate of silver*, or at least the product of the decomposition that this agent undergoes in the pills is absorbed into the economy, and penetrates into the circulatory torrent (3). It is moreover known that chemical investigations, skillfully conducted by M. S. Cloëz, have directly proved this absorption, by permitting the collection by analysis, in the urine secreted in certain cases of disease under treatment at la Salpêtrière, of *silver even*, under the form of small metallic grains.

The actual case which we publish, whilst confirming these principal data, will shed perhaps some new light upon this interesting question of practical physiology.

The case referred to is that of a woman of thirty-four years, J. C. B—, who, during several years, manifesting the very characteristic phenomena of disseminated sclerosis (encephalic and spinal) was admitted in 1868, to No. 14 Salle St. Mathieu, in the infirmary of la Salpêtrière, service

(2) Charcot et Vulpian, *Emploi du nitrate d'argent dans l'ataxie locomotrice*. Bulletin de Thérapeutique, 1862.

(3) The pills of nitrate of silver are made as well with bread crumb, as with powder of marsh-mallow, or with simple syrup. It is clear that in these pharmaceutical preparations a very large portion of the nitrate of silver is modified. Some investigations made by M. S. Cloëz upon freshly prepared pills, have demonstrated that four-fifths, at least, of the salt or silver is *decomposed*, and passes into an insoluble condition, principally under the form of oxyd of silver, and of metallic silver, and perhaps of insoluble salts of an organic acid.

As to the part which remains soluble, it is not even absolutely certain that it remains in the state of nitrate.

Moreover, after that, it is averred that the nitrate of silver undergoes, even in the pills, almost complete decomposition; but, from the point of view which we occupy, we attach to this result only secondary importance.

It is certain, in fact, that the silver has been absorbed in the cases of our patients; for, as we shall explain later, *we have assured ourselves of it by analysis of the urine*.

Charcot et Vulpian, *sur l'emploi du nitrate d'argent dans l'ataxie locomotrice*. Bulletin de Thérapeutique, 1862, p. 1. After this epoch (1862) M. Cloëz had in fact succeeded in extracting a metallic globule from an analysis of urine.

of M. Vulpian, and whose autopsy we have also made during the present year. The confirmatory specimens have been presented by us to the Biological and Anatomical Society (1).

Amongst the numerous medications to which this patient had been subjected, without final success, but always with some amelioration, was *nitrate of silver*.

She had been subjected to it during six years in the following manner :

On the second day of August, 1862, they began with two pills of nitrate of silver each day.

On the eighth of August, when there was manifested a slight amelioration, she was put upon three pills.

From the eighth of August, 1862, to the twentieth of April, 1863, she pursued the treatment with three pills per day.

This was continued nine months, or two hundred and seventy days. From which we may conclude that about seven hundred pills were taken, after which they were discontinued.

The pills, made with care, contained 0.01 centigramme of nitrate of silver ; which amounted to about seven grammes, which were thus successively introduced.

Unfortunately the amelioration was temporary, and it became necessary to resort to other medicaments.

Many were employed without great success.

There was, however, no return to the nitrate of silver, and when we saw the patient upon her last appearance at the infirmary (April, 1868), she assured us that she had taken no nitrate of silver for five years. This was probably true.

We were struck by the tint, approaching to bistre, of the abdomen, and of the colored line relieved upon the edges of the gums. It should be stated that with us she had no further medication with silver in any form.

(1) See Bulletin de 1868, juin et juillet.

At the autopsy, we determined at once with M. Vulpian, under simple inspection, that the kidneys and the plexus choroides were considerably impregnated by the passages of the nitrate of silver.

Later, it was easy for us to establish that the supra-renal capsules also appeared to have undergone this influence.

The microscope and chemical analysis, as we shall indicate later, will complete the confirmation of all our pre-conceptions.

The kidneys, in fact, would exhibit after section a characteristic appearance. They were, as it were, studded, especially in the cortical substance, both superficial and intra-pyramidal, with little black, livid, isolated points presenting themselves under the form of a fine dust, with grains disseminated, but fixed, and imparting to a light and uniform touch the sensation of a beard recently shaved. These were the glomeruli of Malphigi, very apparent, stained by the metal, and appearing altogether and alone, as in the most successful anatomical preparation which we can make for their demonstration.

If prepared in the fresh state, this same appearance may be almost as perfectly recognized after four months of preservation in pure alcohol.

Under the microscope these may be positively determined to be the glomeruli of Malphigi.

It is indeed these, but these alone, which are stained. Their livid color slightly brownish, contrasting with the surrounding tissue. They were either stained in mass and uniformly, as by a blue or violet wash, or tinted in spots, and in addition, outside of the general discoloration, there were certain points, and little zones very clearly defined, of a bistre or sepia color, or nearly black. To us it was very plain in this case, that not only the surface, but even the texture of all or a portion of the glomeruli was affected; at times even the alteration seemed profound (1).

(1) This observation, confirmed moreover by another absolutely similar which we have recently made (September, 1868), in the case of a woman

None of the ducts have ever appeared to us to have undergone any great modification in their tint. In some places it seemed, indeed, that some masses were more deeply stained and tinted yellow.

But this could not be compared with the special and characteristic silvery tint of the glomeruli. On the other hand, what was more clear, and appeared to us of the greatest importance to note and to investigate with care, was the existence of numerous alterations, suggesting the granular-fatty lesions of the renal tubes affected with morbus Brightii.

Now there was in this nothing surprising, since, during life, the urine of our patient had, upon several occasions, after the exhibition of silver, yielded albumen to the tests of nitric acid and heat. It contained no sugar, but its density was 1040. Now it is interesting, I think, to compare this production of albumen and this renal lesion with the evident impregnation and the deep tinting of the glomeruli of Malphigi, consequent upon the treatment with nitrate of silver.

It is clear that there may thus be produced an *argentine albuminuria*, just as under other circumstances, almost identical, there is produced by another metal a *Saturnine albuminuria*. (1)

If observations of this kind should be confirmed, the practitioner should take them into serious consideration in the internal administration of silver. (2)

who took, during two years, nitrate of silver, differs from what has been observed by the majority of authors, who have indicated up to this time that the tissue surrounding the glomeruli was alone colored, also: Frommann, Ein Fall argyria eter., in Virchow's archives, 1859, t. xvii. Also: Ball et Charcot cite plus haut.

(1) Olivier, *De l'Albuminurie Saturnine*. Archives de Medecine, 1863.

(2) Later, in September, 1868, a new fact has likewise presented itself to our observation at la Salpêtrière, but it is unfortunately incomplete as a clinical datum. A woman had, during two years, taken nitrate of silver repeatedly, in pill form, and at the autopsy we discovered plainly traces of

In every case, an examination of the urine of these patients ought always to be made carefully *before* and *during* this special treatment. It may serve to regulate it. For ourselves, we should make an absolute rule to suspend, or to diminish considerably, the metallic medication from the appearance in the urine of the smallest trace of albumen.

Before concluding what refers to the *kidney* itself, we should say that sections of the pyramids did not furnish us with so satisfactory evidences of argentine impregnation as those which resulted from the examination of the cortical substance, to which the most decided alterations seemed to be confined.

This same argentine impregnation of the *supra-renal capsules*, suspected by us when examined by the naked eye, was confirmed in a very clear manner by histological examination.

But here, also, it was in spots that the more deeply tinted points were distinguishable. There were zones of a dark ochre tint deepening to a sepia color. The cells participated in this tint, and appeared more or less intense.

The alcohol had preserved in them, after four months, this new property contracted by disease.

The tint, upon simple inspection of the plexus choroides, suggested that they also were involved. They were equally well preserved, thus colored in alcohol during four months. Their color was a deep yellow bistre, and it was likewise darker in spots; they were also blackish. Under the microscope they could be observed much better. The more deeply tinted points were perfectly well seen, like grains of sepia color.

It would have been regarded as a preparation of the plexus choroides made designedly with a solution of nitrate

impregnation with the metal of the kidneys (glomeruli), and the alterations of advanced morbus Brightii (granular fatty tubules); but it was impossible to recognize the results from a thorough examination of the urine during life.

We refer to this case solely from an anatomico-pathological point of view.

of silver, a reactive agent employed very successfully, as is well known, in histological investigations.

Our researches have likewise been extended to the lungs; but, although we thought that we recognized a slight tinting of the elements of this tissue—the difficulty being here increased from the possibility of confusion with the pigmentary matter so common and the condition termed carbonaceous—we will not decide as positively upon their argentine impregnation.

The other organs have not been examined by us in this connection. In no instance did they offer, upon simple inspection, anything perceptible.

We might, indeed, from the preceding limited examinations, be content to affirm the existence of the silver deposit, and its persistence in different organs of the economy. Proceeding to the examination with certain chemical reagents under the microscope, we may say that we have employed acetic acid, glycerine, alcohol, ammonia, hypochloride of lime, without inducing the least change in the color acquired by the parts tinted by the silver impregnation. But it was no longer so when we used *nitric acid*, and especially *cyanide of potassium*. Both of these, but in different degrees—the greatest effect resulting from the cyanide of potassium—decolorized completely the glomeruli, and gave a general uniform amber-yellow tint to the preparation where previously the isolated silver tints had appeared so conspicuously. (*)

Finally, a new investigation, more decisive, perhaps, and certainly more delicate, has yet again furnished to us a new element of certainty.

From the data of M. Vulpian, M. Cloëz determined once more to attempt the detection of the silver itself.

(*) MM. Ball and Charcot, who had already made the same observations with reference to the majority of these reagents, have hence drawn the conclusion that this solubility of the blackish granules demonstrated that they consisted of an *albuminate of silver*, and not of a *chloride* (*Dictionnaire Encyclopédique*, article *Argent*, déjà cité).

In this instance it was not from the urine, but from the kidney itself, that this distinguished chemist was enabled to extract, by the process of cupellation, a portion of the metal itself, which, at the termination of the experiment, appeared in the form of a little granule, so that we were enabled to present to the Biological Society, extracted from the half of a kidney, *a globule of metallic silver* of the size of a small pin's head, resistant, relatively heavy, almost round, and of characteristic lustre.

The experiment was thus altogether complete and perfect.

We shall not insist upon the interesting consequences which may be deduced from this rare case, since we find related only the case of *Guens*, as susceptible, in some respects, of comparison. (*)

The case was that of an epileptic, who for sixteen years had discontinued the use of nitrate of silver, and at whose autopsy traces of impregnation with the metal were found in various tissues. In our case, the treatment had been discontinued but for five years.

But these new facts should be specially noted, that it was the texture of the glomeruli of Malphigi, and not *the surrounding tissue alone*, which was impregnated; that there were present the lesions characteristic of Bright's disease, apparent in the profound alterations of glomeruli due to medication (*argentine albuminuria*); that the supra-renal capsules were impregnated; and finally, that it was possible, having established the actual facts by ocular demonstration and by microscopic examination, to separate chemically, under the form of the argent itself, the incontestable proof of the physical and physiological action. Legal medicine, as well as therapeutics, may deduce from this data of the highest practical interest.

W. H.

(*) *Van Guens* (Donders d'Utrecht), *Archiv. fur die Hollandischen Beitrage zur Natur und Heilkunde*. Berlin, 1857.

Solution of Nitro-Sulphate of Iron.

BY Z. C. MCELROY, M. D., ZANESVILLE, OHIO, PRESIDENT
MUSKINGUM COUNTY, OHIO, MEDICAL SOCIETY.

The formidable list of preparations of iron in our national pharmacopœia, would seem to forbid the idea that the whole ground was not most fully covered; and that any addition must have very conclusive reasons for its recognition by the profession. Notwithstanding their number, however, the manufacture of preparations not recognized by the pharmacopœia, on a very large scale, by various commercial houses, is a well known fact; as is, also, another fact, to-wit: that they are largely used by the professions. That they supply a want may as well be admitted as a still further fact. No doubt various causes contribute to these ends; but a main one certainly is, their pharmaceutical elegance, and agreeable sensible properties. The elixirs of calisaya and iron, and with bismuth, must be known to all who take and read medical periodicals; and any defect in their mode of making them known, would be compensated for by the active, polite, and vigilant commercial agents of the houses engaged in their manufacture.

Recognizing in iron a therapeutic agent of the very highest importance, it has often seemed to me that some form, which could be readily put up extemporaneously, having the elegance and agreeable sensible properties of the popular elixirs, was still a desideratum to the general practitioner, if only for the sake of knowing precisely what he was prescribing.

A personal and professional friend of the writer, Dr. J. R. Black, of Newark, Ohio, communicated to the *Cincinnati Lancet and Observer*, for March, 1868, a formula for the preparation of what he continued to call, probably because it was the name by which he received it, "Liquid oxysulphate of iron." It is as follows:

R. Ferri Sulph: ʒ ij;
Acid Nitric: j ʒ ij;
Aqua Distill: ʒ iss;

Rub the sulphate with the acid in a mortar, gradually add the water after the sulphate is all dissolved, and filter through paper. Dose from 7 to 12 drops in water or quassia infusion.

Though this is given verbatim, as reported by Dr. Black, a very slight examination suffices to discover its want of scientific exactness. There is no quantity indicated at the close of the process. No statement as to the quality of either the sulphate of iron or nitric acid. It seems to me that these should be *pure*, not *commercial*, and that at the end of the process there should be one and one-half ounces of the solution; even if it falls short, distilled water should be passed through the filter until that quantity is obtained. If in excess, evaporate on sand bath.

The writer is not quite chemist enough to state precisely what changes occur on the addition of the acid to the sulphate. Large volumes of nitric oxide, becoming, probably, hyponitric acid by contact with the atmosphere are liberated. It is probably a tersulphate, with considerable free nitric acid in the resulting solution. Its color is very different from the tersulphate of the pharmacopœia. So that it must be that and something else; and that something else, most likely, free acid and water. After passing through the filter the solution is a very beautiful pale amber color, and seems to be quite stable, as a sample was examined this very morning at an apothecary's, more than a month old, which showed neither precipitate or change in any way. Its chemical formula is probably that for per sulphate of iron, plus nitric acid and water, and might be written in chemical symbols as follows: $\text{Fe}_2 \text{O}_3. 3 \text{SO}_3 + \text{NO}_3 + \text{HO}$. It mixes freely in all proportions with water, spirits and simple syrup, without altering its beautiful color. Its incompatibles are tannin, gallic and malic acids. The point of most practical importance to the general practitioner is, that here is an acid salt of iron in solution, which, in extemporaneous prescriptions, without incompatibles, rivals in pharmaceutical elegance, and pleasant taste

any of the commercial elixirs of calisaya, iron and bismuth. Sulphate of quinia may be added in any proportion, instantly dissolving, thus forming a suitable elixir or calisaya and iron, without change of color, but acquiring the bitter taste of quinia in proportion to the quantity added.

Now suppose an elegant acid iron preparation be desired, let the following formula serve as a basis, for an indefinite number of variations :

R. Cinnamon water,	f 3 v;
Simple syrup,	f 3 ij;
Diluted alcohol,	3 j;
Sol. Nitro-sulphate of Iron,	3 ij;

Dose, a teaspoonful for an adult.

Brandy and whisky both discolor the mixture, as do most of the aromatic tinctures. The aroma must come from the volatile oils, either through the alcohol, or pure white spirits or water. To preserve its elegance it is only needful to remember that nothing containing tannin, etc., can be added without darkening the color, though where this is not objectionable, the most valuable part of the sensible properties, to-wit: pleasant taste is preserved. It is a gratifying fact that this preparation is seldom indicated in connection with its incompatibles. The indications for acid preparations of iron are usually sharply defined. Broadly viewing the *modus operandi* of organic life in the human body, it is seen that in the construction of its various tissues, textures and organs, out of other organic material, the acid elements predominate; without acids there can be no digestion in the human stomach, for it is in truth an acid alembic. The mission of alkalies, and the salts they form with most acids is to arrest construction, and to break down and remove effete matter from the system.

For diseases characterized by great waste or destruction of tissue, the mixture of the chloride of iron, an acid preparation of the pharmacopœia, has been found a very valuable remedy. Why? Because it is an acid preparation of

iron, and acids, better than any other preparation, stay the processes of destruction and promote those of repair. That is just why large doses of the common tincture of iron are is not so urgent, as in anæmic and chlerotic conditions, so efficacious in erysipelas and diphtheria. When the waste iron in combination with organic acids; or pure, as in the ferrum reductum; or neutral, as in the precipitated carbonate, are very appropriate, and very highly useful, but will disappoint if relied on to stay rapid wasting. These generalizations being conceded, and they are original with the writer, it necessarily follows that in children debilitated by bowel complaint, the solution of the nitro-sulphate of iron fulfils all the indications needful to recovery with elegance and agreeable pharmacy. So, too, it would be appropriate in adults debilitated by excessive discharges from the skin, bowels or lungs; no better, perhaps, than the common Tinct. Ferr. Chlor., but far more elegant and pleasant to the taste, and, therefore, in many cases, more likely to be taken, which, are after all very weighty considerations in highly civilized life, whether in city or country. It is considered an imperative duty on myself to present medicines in their most agreeable forms to those who seek my professional counsels.

It can readily be seen, then, that while the number of preparations of iron is very large, this acid sulphate fulfills certain indications, better than any one of the long list, and from its cheapness, elegance and efficiency, has its own place among them.

Before me stand some "physicians' sample packages," placed on my table by a very polite agent of the manufacturers, of what they call "Elixir of Calisaya Bark and Iron," and the same with "bismuth," whose pharmacy is all that could be desired. Each package has a printed formula of its contents. Some of the ingredients, as for instance, brandy and whisky, contain tannin, and yet the solutions are beautifully clear and pleasant to the taste. Now, these formulas cannot by any possibility represent truthfully the

contents of these "sample packages," for, if brandy or whisky are added to any of the pale solutions of iron, the color is quickly changed to some more or less dark tint. And as these formulas are clearly not indicative of the contents of these packages, none but those in the secret of their manufacture can tell precisely what they do contain, save that some aromatic spirits, sugar and iron are present; but of how much of each, and the mode of preparation, we are left entirely in the dark. Not so, however, with the extemporaneous preparations of the acid sulphate, for apothecaries will put up what the physician's prescription calls for, and hence, when thus written for, the physician has a definite knowledge of what the patient is to take.

After trial, others, like myself, will thank Dr. Black for communicating the formula to the profession, even though it is wanting in scientific exactness. To supply, to some extent, at least, this defect is the object of this paper. It has been used by the writer a great many times, and with very satisfactory results; for the reason that patients, both adults and children, will take pleasant medicine regularly, when they are very apt to forget it or postpone it, if it is unpleasant to the taste, perhaps, more particularly in chronic cases.

A Case of Aconite Poisoning.

BY JOHN W. HENLEY, M. D., YATES CITY, KNOX CO., ILLS.

Editor Chicago Medical Journal:

Aconite is becoming so extensively used by the medical profession, both as an internal and external remedy; and being a powerful acro-narcotic poison, for which there is known no direct antidote, the following may interest many readers of *THE JOURNAL*.

Dec. 31st ult., was called in great haste to visit Mrs. Varney, five miles from town. She had been confined two

days previous, and was directed to take one tablespoonful of castor oil on third day after accouchement. I had sent by her husband the following mixture, for a neighbor woman, to be used as a liniment for neuralgia of the face :

R. Tinc. Aconit, rad. f $\frac{3}{4}$ jss :
Chloroformi.
Spts. Rectificat, aa f $\frac{3}{4}$ j ;
Oil Oliv. $\frac{3}{4}$ j ;
Misce.

Of which one table-spoon was administered to Mrs. V. for castor oil. I arrived at the scene of confusion in about two hours and a half after the poison had been swallowed. Found that she had been induced to swallow two large tablespoonfuls of castor oil immediately after the mistake was discovered. She was suffering no acute pain, and what is a little strange, there was no gastric irritation, had been no vomiting, nor the slightest nausea. There was considerable depression of nervous energy, a pricking and benumbing sensation in mouth, throat and limbs, with a sense of fullness all over the body. The most disagreeable sensations she complained of, were a coldness about the stomach, and the unnatural and large feeling of the limbs. The pulse were 80 and rather full, respiration free and easy. The surface of the body was but very little colder than natural. The sense of taste was entirely wanting. After a hasty survey of the condition of the case, I gave two teaspoonfuls of ground mustard in warm water, with a view of producing speedy emesis. She neither tasted the mustard, which was fresh ground, nor felt the slightest effect of it in the stomach. After waiting some 15 minutes I gave nearly one drachm ipecac, in two doses, following with copious draughts of warm water, sweetened. In a short time she vomited freely, which was followed by free evacuations of the bowels. All the time the above emetics were being administered the limbs were rubbed with stimulating lotions, which afforded much relief, as the friction

destroyed in part the disagreeable tingling and sense of fulness. The patient now began to feel a great sense of depression. The pulse were weak and down to 48. Extremities cold. In short, there seemed to be a great tendency to death by asthenia. Gave whisky sling, with ginger, freely and repeatedly. In one hour the patient was bathed in a copious perspiration, and began to revive. In two hours more I left her safe. The only inconvenience she experienced afterward was the profuse perspiration and consequent prostration, which lasted about forty-eight hours.

The dose of strong fine aconite root was undoubtedly a fatal one if it had been administered alone. And what was there in the combination which served at least as a partial antidote? It could not have been the alcohol, for there was not a sufficient quantity to even afford temporary safety. Neither could it have been the olive oil, for there was scarcely a half drachm in the quantity given. But the olive oil contained in the mixture, and the castor oil given immediately after the poison was swallowed no doubt served in part to mitigate the acrid properties of the aconite. And there is no doubt in my mind but the chloroform was the agent in the mixture which saved the patient until other means were applied to eliminate the poison. For the effects of the aconite and chloroform being opposite, the one tends to counteract the effects of the other. And since my experience with this case I feel confident that the best remedies for poisoning from aconite, are, aside from evacuating the stomach by active emetics or stomach pumps, oils to counteract the acrid properties of the drug, and powerful stimulants to prevent the depression of nervous energy and brain. Among the latter let me suggest as paramount, chloroform, with the yolk of an egg, and water, to be given according to the amount of depression.

The suggestions here made, and facts gained in the treatment of poisoning by aconite may with equal propriety prove efficient in destroying the dangerous effects of an over-dose

of the Gelsimum Sempervirens. And I would suggest to Dr. Hani, of Indiana, who reports a case of fatal poisoning by this drug, in Dec. 1st number of THE JOURNAL, that he waste not valuable time in administering opium and strychnia as antidotes to this poison, but use more direct stimulants as soon as practicable, and thereby sustain the vital powers until the narcotic has spent its force.

Electricity: Its Use in Hysteria.

BY JAMES T. NEWMAN, M. D., CHICAGO.

Was called upon the 1st inst., at half-past nine in the evening, to see a young woman who was suffering with hysteria. The paroxysm had been brought on by excessive grief. Ordered her to have a warm foot bath, after which she was put in bed. It was hardly of any use, because two strong men could with difficulty control her raving, yet she was small and very frail. The fits would come on every five or ten minutes, and last equally as long. Prescribed the following:

R. Assafetidae	3j; (rub well, add)
Aqua Mentha pip.	3vi;
Tinct. Valerianae Ammoniae	3ii;
“ Castorei	3iii;
Ætheris Sulphurici	3j;

M. Sig. A teaspoonful hourly during the night.

Visited her in the morning; found her no better than when seen last, the only difference was that the spasms were longer going on and coming off. Ordered an enema of Assafetida with mucilage acacia. Prescribed at the same time:

R. Zinci Valerianatis, gr. xii;
 • Potassii Bromidi, gr. xx;
 Misce fiant in chart. iv;
 Sig. One every four hours.

January the 2d, at four o'clock in the evening, saw her again; found her frothing at the mouth, and evidently worse. She had taken a small quantity of soup at noon, the only nourishment received since taken. I knew she could not long withstand such powerful straining and jerking of the limbs, and my faith was so strong in the nervous sedatives, that I resolved on repeating the powders, with the exception of adding morphia and changing quantities, as follows:

R. Zinci Valerianatis, gr. xx;
Potassii Bromid, gr. xii;
Morphiæ Sulphatis, gr. iv;
Misce fiant in chart., No. vi;
Sig. One every two hours.

She went to sleep at midnight and rested quietly all night, when all at once the paroxysms broke forth with redoubled fury; the rest she obtained seemed only to increase their power. Ordered her to have some beef tea instead of water when she wanted to drink. There she lay raving and tossing like a maniac; medicine seemed of no use. I determined to change my course of treatment. I thought of electricity, and acted on the impression. Took the electro-magnetic battery and placed one of the poles to the occiput and the other to sacrum; the effect was instantaneous, the rigidity of the muscles gave way. She soon went to sleep, and had no more paroxysms that day. In the morning, January 4th, I made another application, and to use her own words, she said it gave her strength and cheerfulness. She recovered rapidly, and soon went about her work as usual.

CASE 2D, JAN. 9TH, 1869.—Was called to see a married woman aged 36 years. The poor woman had suffered both mentally and physically at the hands of her cruel husband, and to cap the climax of his meanness he had sold all the little treasures given her by her mother. Pardon me for taking up so much space, I will now come to the case.

Found her laboring under an attack of hysteria, frothing at the mouth, twitching and jerking of the limbs. I resolved to give the electro-magnetic battery another trial, which I did, and to my great pleasure the effect was magical. She has not had any more paroxysms since I first used the battery. By the way, I neglected to say that she had the spells about a week before I was called. I have just left her house, and she says that she feels better than she has felt for a long time. In recording this case I have come to the conclusion, that much good may result from the use of electricity as a therapeutic agent, but we must not expect too much from it, for the simple reason that we have no specifics.

Remarks on the Prunus Virginiana, Particularly the Wine and Ferrated Wine of Wild Cherry.

BY X. TONER, M.D., ALBANY, NEW YORK.

The medicinal bark of the *Prunus Virginiana* is the inner bark of the *Cerasus Serolina*, or Wild Cherry, a large tree indigenous in the United States. The bark may be obtained from the root, trunk, or branches of the tree—that of the root is preferred by many. Deprived of its epidermis, it is of a reddish-yellow color, brittle, and easily pulverized. When fresh, it has the smell of peach leaves or bitter almonds. Its taste is bitter, astringent, and somewhat aromatic. Its active principles are tannic acid and amygdalin. In the process of distillation traces of hydrocyanic acid have been discovered.

The *physiological action* of the wild cherry is two-fold, viz : that of a stimulant or tonic to the digestive function, and, by reason of its amygdalin, as a direct sedative to the nervous system, and through that upon the circulation. *Dr. Eberle* states that under the influence of copious draughts of the infusion (3 i—Oij), continuously kept up, the

pulse fell from seventy-five to fifty per minute ; but immediately upon the suspension of the draughts of the infusion the pulse returns to its normal condition.

In regard to its *therapeutical* action there is very general agreement among all who have used it to any considerable extent. Few remedies, in fact, have had a more happy fortune in this respect. We quote, as expressing very happily the well-nigh unanimous opinion of the profession, from Professor Wood, in relation to the crude article or the domestic infusion :

“The joint tonic and sedative properties of this bark admirably adapt it to the treatment of cases of general debility, with enfeebled digestion, an irritable state of the nervous system, and excessive frequency of pulse. Long before its chemical peculiarities were discovered, experience had established this application of the remedy. In the treatment of *pulmonary consumption* it has for many years been a favorite in this country, and, before cod-liver oil came into notice, was probably more relied on than any other single medicine. It was employed not only in the advanced stages, when *hectic fever* had set in, but from the beginning, and often as a preventive, in cases where a strong tendency to the disease seemed to be displayed. It was given with a view of imparting tone to the digestive organs and system generally, and thereby modifying the tuberculous diathesis, and was preferred to other tonics because it was thought to produce these effects with less danger of undue excitement. Now that it is known to be positively sedative to the heart, and to the nervous system, we can better understand its usefulness in that complaint. In other forms of *scrofulous disease*, presenting a similar complication of debility of the digestive and nutritive functions, with frequency of the pulse, it is equally indicated. Few remedies are better adapted to *hectic fever*, from whatever source it may proceed. In the debility of *convalescence from fevers* and other acute diseases, when attended, as it often is, with night sweats, a frequent pulse,

and sleeplessness, restlessness, or other functional nervous disorder, the wild cherry bark is also an excellent remedy."

The various preparations of wild cherry, in so far as they are efficacious, act by virtue of the same principle; but certain of them, as we shall presently see, have been so prepared as to unite the virtues of the wild cherry with the specific properties in a very useful manner. They are chiefly beneficial in debility, and convalescence from acute diseases, uniting, as they do, with a tonic power the property of quieting irritation and diminishing nervous excitability. Their use is indicated in all cases requiring a general tonic, particularly the impairment of the constitution by dyspepsia, debility resulting from inflammatory fevers, and in those cases where the digestive powers are impaired with general or local irritation existing at the same time. Also, owing to their slightly astringent properties, they are beneficial in the summer complaints.

They have not the power to interrupt the paroxysms of intermittent fever, but they can assist to keep off the paroxysms when once they are broken up, and when it is evidently injurious to continue the quinia.

In speaking of the remedies for chlorosis, Dr. J. Bates writes, concerning the excellent and delightful preparations of *Messrs. Tilden & Co.* :

"The *wine* of wild cherry is a very excellent preparation, and should be administered in connection with other remedies usually given in this malady. The wine, if scientifically prepared, will be found advantageous in this complaint, even when given alone. It may be used in doses of a dram to half a wine-glass three or four times a day. Undoubtedly the best preparation of this agent for the treatment of chlorosis is the *ferrated wine* of wild cherry. Diseases of this class, uncomplicated, will in most instances be signally relieved by this valuable combination. By uniting the hæmatinic and tonic properties of iron with the sedative and tonic properties of the prunus, in the ferrated wine of wild cherry, a happy union of medical properties is accom-

plished, which renders it more useful in a great variety of atonic diseases, and far more efficient than the same agents would be if administered separately."

But it is not alone in chlorosis that the value of these preparations we are speaking of is exhibited. In all diseases where there is a reduction of the red globules of the blood, especially in anæmia, the *ferrated wine of wild cherry* will be found to prove its success.

Dr. Flint, in speaking in reference to the therapeutics of the anæmia of *tuberculosis*, *Bright's disease*, &c., writes :

"When it is the chief condition to be met therapeutically, the first points are to remove, if practicable, the cause or causes on which it depends. The next point is to employ measures to restore the normal quantity of red globules. * * * * *First*, a nutritious alimentation. * * * * *Second*, the use of tonics and stimulants. * * * * *Third*, iron as a special remedy. * * * * *Fourth*, a regimen calculated to increase the energy of the assimilative functions." * * * *

To meet the second and third points, there is no better tonic and stimulant preparation than the *ferrated wine of wild cherry*, given in doses from one to four drams three times a day.

This *ferrated wine of wild cherry* I regard as an *exceedingly valuable preparation*, since it so *happily* and *perfectly* unites the blood-restoring iron with general tonic and nervous sedative effects. We have prescribed it in a large number of cases where the nervous system was prostrated, and for the legionic symptoms concomitant of general debility, and have been extremely gratified by its prompt and efficient action. In fact, we have found no one of the general vaunted remedies *superior*, or even of *equal* efficiency to it to combat such morbid conditions.

The *ferrated wine of wild cherry*, as extemporized from the fluid extract, we have found from observation is *vastly inferior* to that scientifically prepared by the firm of Tilden & Co., both in its physical appearance and therapeutical

action. Already have we seen it in market spuriously prepared, which is having its evil tendencies, and must inevitably result in throwing into disfavor the *honest article*. It is unfortunate that there is scarcely a medicinal preparation which professes any marked advantages, placed in the hands of the physician, before competition goes to work to destroy its efficacy by means too palpable to require enumeration here.

Dr. Allbut (in Braithwaite's Retrospect, part 55, page 258,) speaks very highly of the wild cherry. He says, "I have found the wild cherry useful not only in cases of cardiac disturbance, but also of general nervous excitability, of atonic dyspepsia, and of intestinal irritability. It seems, however, to have a more special bearing upon the arterial nervo-muscular tissues, as digitalis also has, and in proper cases it comes as a valuable substitute for digitalis when this medium is ill borne." Dr. A. declares that the bark of the wild cherry in doses under one dram of the tincture and under one ounce of the infusion does not nauseate, as do *opium*, *digitalis*, *conium*, and other sedatives, though, indeed, it will not take the place of digitalis in extreme cases."

Dr. Eberle, in speaking of the medicinal value of the wild cherry bark, says, "It lessens the frequency, tension, and irritated state of the pulse, moderates the cough and profuse nocturnal perspirations, checks the diarrhœa, and sustains the general strength of the system.

In *amenorrhœa* the combination of the ferrated wine of wild cherry and stramonium has proved valuable.

In *pertussis* the fluid extract of belladonna, with the syrup of wild cherry, has been serviceable in some cases.

After all, what we claim especially for the *wine*, and *ferrated wine* of wild cherry is, not that they are specifics in any one disease, but that these preparations can benefit, and have benefited patients suffering from *tuberculous consumption*, *chlorosis*, *anæmia*, *dyspepsia*, *debility* arising from various causes, *convalescence* from acute fevers, etc., etc.

They have, in addition, the merit of being very palatable, a point not always sufficiently regarded.

A medicine is none the less efficacious certainly because it has a pleasant taste. When we can *conciliate* the palate at the same time we are attacking a disease, we shall be quite as speedily successful in our efforts. Certainly, with children and fastidious invalids who have been compelled to *dose* largely, it is a merit to bring a medicine that shall be pleasant to take, and potential as a remedy.

PROCEEDINGS OF SOCIETIES.

Our thanks are due to the secretary, H. P. Strong, M. D., for the manuscript advance copy of the proceedings of the

WISCONSIN STATE MEDICAL SOCIETY.

The society convened at Madison, June 10, 1868, Dr. H. Van Dusan, president, in the chair, and Dr. A. J. Ward, secretary, *pro tem*. After formal business, reception of new members, etc., discussion occurred with reference to issuance of diplomas by the society; with regard to examinations for life insurance; services as experts in the courts, etc., etc.

Dr. Cody reported a case of fracture of the ribs, the interesting point of the case being the emphysema that ensued, it having extended over the whole body. There was also a large amount of hæmorrhage of the lung.

Dr. Whiting spoke of the danger of fracture of the ribs, and did not believe that in half the cases reported there was any fracture.

Dr. Taggart thought the danger depended upon displacement of the bone.

Dr. Barrett said he had known of ten or twelve cases that had been reported in his town, and he did not know of but two of the cases that were really fractured.

Dr. Brown offered the following resolution, which was adopted:

Resolved, That in explanation of the action of the society heretofore, upon the subject of admission to membership, the following conditions are required: The applicant shall present to the Board of Censors a diploma

from a regular organized school of medicine of good repute, or a certificate or diploma of membership in a county or district society, accompanied with a certificate of six years practice, and of good moral and professional character, or he shall submit to such an examination as the Censors may impose.

Dr. Ward asked leave to present a patient to the society for opinion as to the nature of the disease, which was granted, and an examination made by some of the members of the association present. The patient was a lady of about 30 years of age. After confinement, sometime since, she left her bed rather too early, and was attacked with roaring in the right side of the head. This is constant and very annoying. Instant relief is obtained by pressure upon the common carotid artery, and remains so long as the pressure continues. This is the only means by which relief is afforded. There was a diversity of opinion as to the nature of the difficulty, and no definite conclusion obtained.

Dr. Marks, chairman of committee on surgery, made a report, at length, on treatment of fractures of the thigh. The report goes on to prove, by the best authority, that oblique fractures of the femur in adults nearly always results in more or less shortening. He also proved that the majority of surgeons prefer the straight position in treatment of these fractures, and goes on to say that, "where there is displacement of the fragments, the points of bone must be in contact with the soft parts, and that any unnecessary handling or twisting of the limb inflicts injury upon the muscles and other tissues, which taxes nature to repair. Gentleness is not incompatible with good surgery, although there are men who, judging from their method of manipulation, would differ with me. Those claiming to be good surgeons often inflict an amount of unnecessary injury to the soft parts, in their examinations, that takes nature weeks, I might say months, to repair." The treatment he has adopted and prefers, is to use extension by means of adhesive plaster applied to the leg, terminating below the foot, to which is attached a weight running over a pulley, varying in size from eight to twenty pounds in adult cases. A sand bag is placed on each side of the limb, and the foot of the bedstead elevated three or four inches, the weight of the body being the counter extension. When the fracture occurs below the lesser trochanter he applies pasteboard splints the whole length of the limb upon either side, using the extension as before indicated.

The advantages claimed for this method are: First, ease and comfort to the patient. Second, the dressing does not interfere in the least with the circulation in the limb. Thirdly, the limb can be seen at all times, and in case of compound fracture the wound can be dressed as often as desirable. Fourthly, the limb can be dressed and placed in position in one-fourth the time required to apply the splint and roller. Fifthly, "I claim better results from this method than from any other I have ever tried, though I don't pretend that it will always prevent shortening."

In fractures within the capsule, or partly within, he uses only sand-bags with the weight and pulley, as before alluded to. Dr. Marks gave a history of several cases treated in this manner, and the results warrant a general trial.

Dr. Mason, of Prairie du Chien, was called upon to give the result of his experience in the treatment of fractures without splints. He made a statement that he had treated fractures of the femur and tibia by the use of sand-bags and the weight with good success, and had also used the same treatment for synovitis with good results.

Dr. Marks reported at the previous meeting a case of aneurism of the subclavian artery then under treatment, and for which he had amputated at the shoulder joint. The patient recently died, and he presented a full written report of the case, with a statement of the appearance of the tumor after death.

Dr. McKennan, of Sauk City, presented a written report of a case of shoulder presentation, when the uterus was ruptured during the act of version. The child was immediately delivered and the mother recovered.

He also presented the written report of another case, where the woman was very short of stature, but stout and robust, and had a deformity of the pelvis from an undue prominence of the promontory of the sacrum. Antero-posterior diameter less than three inches. She had borne twelve children, nine of which had been delivered with instruments, and were dead. The tenth, eleventh and twelfth were very small, and were born without instrumental aid. He was called to her in her thirteenth confinement, and found the pains strong and the head presenting and pressing strongly against and partially engaged in the brim of the pelvis, and so it remained for

twelve hours. The doctor then turned the child and delivered by the feet, considerable force being required to extricate the head. The child was alive, and weighed some ounces over thirteen pounds.

The report of this case gave rise to some discussion as to the practicability of turning in such cases, some apprehending that in most cases the head could not be extricated.

Dr. Dalton, of Mineral Point, made an extended report of a case of aneurism of the axillary artery, which terminated in death. The patient presented himself with a large pulsating tumor in the left axilla, a small part presenting above and within the acromial articulation of the clavicle, the scapula considerably elevated, a pain at times in the left arm, with considerable swelling, and at all times a numbness, or as he expressed it, "a dead feeling extending to the ends of his fingers." He goes on to give a history of the case from the first appearance of the tumor. Told the patient the only remedy was ligation, and that the result would probably be fatal under any method of treatment. He decided to have the operation performed, and Dr. Dalton tied the left subclavian artery at the outer margin of the external scalenas, following the form of incision introduced by J. Kearney Rodgers. The operation was followed by sensible diminution in the size of the tumor and coldness of the whole surface of the arm. Case did well up to the twenty-fourth day, when the ligatures came away followed by slight hæmorrhage. Incision had entirely healed, except that portion about the ligatures, warmth nearly restored, and tumefaction almost disappeared. The case went on until the incision entirely healed, and in six days he was discharged as cured.

The operation was performed in November, and on the 9th day of March following he felt pain in the back and right shoulder, and on the night of the 10th he suddenly expired. Dr. Dalton closes his report, which is given in detail, as follows:

"I requested a *post mortem*, but could not prevail upon them to grant it. Therefore of what he died I am wholly ignorant, but from their description came to the conclusion that it might have been angina pectoris. They stated he had been suffering as usual with the pain, when he suddenly threw his right hand to his left side, screamed with pain, turning himself partially over he became easier, but

his case was of short duration. In from three to five minutes he acted in the same manner and expired.

"Whether this could in any way be connected with the aneurism, or operation, is a question I leave to the profession to decide."

Dr. Ferrin, of the committee on practical medicine, made a verbal report of an anomalous case of pain and irritability of the urethra.

The subject of puerperal convulsions having been incidentally brought up, a very general and animated discussion upon the pathology and treatment followed. President Van Dusen left the chair and participated in his usual pointed and energetic style. He was full of the subject. Being an elderly gentleman of large experience and close powers of observation, he was considered good authority upon this subject. His opinion was, that it usually occurred in persons of full or plethoric habit, and bleeding was the remedy. Such had been his practice, and he had never lost a case. He had but little faith in anæsthetics without bleeding, and such appeared to be the general opinion.

President Chadbourne, of the State University, appeared and was introduced by President Van Dusen. He gave some practical remarks upon the duties and requirements of the medical profession. He introduced the subject of establishing a medical school within the State under the law creating the university, and said, as one of the members of the committee appointed by the Regents to take into consideration the practicability of a school to be established at Milwaukee or elsewhere, he felt desirous to advance the project, but he felt that the initiative should be taken by the State Medical Society, as it must in a great measure depend upon it for its support and direction, and he hoped that the society would take action upon this when it seems to be desirable to organize such a school.

The subject of treatment of rheumatism was under discussion for sometime, and the majority seemed to favor alkalies as the most efficacious remedies.

On motion of Dr. Marks, Dr. Taggart was requested to furnish a written report of a case of spontaneous rupture of the *sphincter ani*, also that Dr. McKennan be requested to furnish a written report of his treatment of fracture of the malar bone, and Dr. Cody of a case of emphysema.

After appointment of committees and ordinary business, the society adjourned to meet on the 3d Wednesday of June next, at Madison.

EDITORIAL.

Medical Legislation.—Protection.

If the assembled wisdom of the State Legislature pass any bills for the regulation of the practice of medicine and surgery in this Commonwealth, we trust they will not assume that it is in any sense for the protection or advantage of the scientific medical profession. Educated medical men do not ask for protection—they need no bolstering up, or the application of legislative splints or bandages. If such a bill as is contemplated becomes a law, we shall expect it to be considered as testimony that the people of the State can not take care of themselves. Accordingly to all precedent, such legislation has been considered a matter of persecution and intolerance by the classes at whom its penalties are aimed, and the people will not be slow to manifest their sympathies with the poor persecuted objects. We are sure that this will be the result. The question involved will enter into every bar-room caucus and every swindling political convention. The severer the penalty, the more certain and profound the reaction.

There is not in history an instance of more sublime self-abnegation than is now presented in the spectacle of a great, learned and powerful profession voluntarily tendering its control to a single political officer. Can there be a more illustrious exhibition of the magnanimity which characterizes the Medical Profession?

We have no doubt his present Excellency of Illinois will discharge the duty of supreme arbiter of medical matters in this State excellently well, and we will not permit ourselves to tear away the veil which as yet conceals the name and attributes of his illustrious successor.

It is humbly hoped that if a king is given to the Æsculapian realm, he will prove neither King Log nor King Stork—but meanwhile: WHO SHALL GUARD THE SHEPHERD?

Rush Medical College

Puts forth its annual announcement of the Spring Course of Instruction for 1869 in the present number of THE JOURNAL.

Every student of medicine is urged to consider the advantages to him of remaining in the city during the spring and summer, when the best opportunities are afforded for successful study. The hospitals and dispensaries are then overrunning with material illustrative of disease, and the student may have these facilities at a comparatively trivial expense.

He needs access to libraries and reading rooms; and, above all, he needs to become familiar with earnest men in the profession, that his character may be stamped by the example of their industry and habits of attention. He needs a text book, daily and hourly illustrated in the street; the class-room, the laboratory; the *clinique*, the hospital ward, and the dead-house, and the active rivalry of associates—a sure road to excellence.

The design of the course is that it may supply the want of a numerous body of students who must pass the time more or less unprofitably while removed from the best appliances during a long vacation. The majority of medical students in the North-west do not need to be reminded of the value of time or money. A year given to close observation under the tutelage of the college will insure practical ability with the prospect of immediate reward. The College offers to become Preceptor as well as *Alma Mater* that the highest luster may be given its *Alumni*.

FOREIGN ITEMS.

[FROM LA GAZETTE MÉDICALE.]

M. Claude Bernard has recently performed some interesting experiments in illustration of pathogenesis. He injected into the veins of rabbits, amygdaline or emulsine separately; the animals appeared to suffer no inconvenience. After which he injected into the different veins of the same animals amygdaline and emulsine, and the animals speedily manifested the symptoms of hydrocyanic acid poisoning, with fatal termination. The amygdalic fermentation is thence produced in the blood, since the emulsine a fermentescible matter, is brought into contact with its ferment.

In another series of experiments, M. Bernard injected into the veins of a dog, a solution of sugar and of yeast of beer. The animal died in two or three days with adynamic symptoms; the autopsy revealed lesions analogous to those of putrid infection. Here, again, the primitive alteration of the blood has had no other than the result of the fermentation of the sugar under the influence of the yeast. It would have been interesting to have ascertained, by microscopic examination, if the presence of the torula cerevisiæ would confirm the induction already made from direct observations.

M. A. Dubreuil communicates to the *Journal de l'Anatomie et de la Physiologie*, &c., &c., Ch. Robin, the following note upon the cicatrization of bones and nerves.

Having removed from rabbits the middle portion of a radius with its periosteum and having seen the bone reproduced, he compared these results with those obtained after the resection of nerves, and deducts therefrom the following conclusions, viz: "When a portion of the bone or of nerve is resected, the loss of substance is replaced by a tissue which, at the end of some time, undergoes *osseous or nervous substitution*, for which it is not at all necessary that the normal sheath of the portion excised, whether periosteum or neurilemma, should remain," etc., etc., etc.

M. J. O. A. Mongeot asserts, as the result of his investigations into certain derangements of nutrition consecutive to nervous affections, that there exist no fibro-cellular trophic nervous elements or tubes having direct action upon the nutrition and the secretion of the elements situated in the vicinity of their extremities or of their cells of origin.

There are no trophic nerves known other than the vaso-motors.

The secretory disturbances, those of absorption, indurations, softenings and hypertrophics or other alterations consecutive to lesions of nerves, are

consequences of circulatory perturbations by the intermediation of the aforesaid nerves, and not the consequence of the action of the nerves which would have, after the manner of electricity for example, an influence upon the molecular or chemical acts of assimilation or disassimilation in a zone of a certain extent outside of their surface.

Tubercles of the retina and the choroid, considered as diagnostic of tuberculous meningitis.

Apropos of this subject M. Bouchut asserts :

1st. That tubercles of the retina and of the choroid indicate either tuberculous meningitis or general tuberculosis.

2d. A febrile case presents disturbances of intellect, of motion and of sensation, the existence of tuberculous meningitis may be inferred.

3d. Tubercles of the choroid constitute one of the most rare manifestations of the tuberculous diathesis.

4th. Tubercles of the choroid occur under the form of white miliary granulations. Sometimes brilliant and nacreous.

5th. The retrogression granulo-fatty metamorphosis of the normalelements of the retina and of the choroid cells, is the origin of tubercles of the retina and of the choroid.

BOOKS RECEIVED.

A TREATISE ON THE PRINCIPLES OF MEDICINE AND PATHOLOGY, DISEASES OF WOMEN AND CHILDREN, AND MEDICAL SURGERY. By W. PAINE, M. D. Philadelphia: *University Publishing Society*.

THE PHILADELPHIA SYSTEM OF OBSTETRICS. IN TWELVE PARTS. FULLY ILLUSTRATED. Designed for a Text-Book for Students, and as a Reference for the Practitioner. By Jos. S. LONGSHORE, M. D., Professor of Obstetrics, etc. Philadelphia: *University Publication Society*.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS, DELIVERED AT UNIVERSITY COLLEGE HOSPITAL. By SIR HENRY THOMPSON, Surgeon Extraordinary to H. M. the King of Belgians; Professor of Clinical Surgery, and Surgeon to University College Hospital. With Illustrations. Philadelphia: *Henry C. Lea*, 1866. Pp. 204. Chicago: *S. C. Griggs & Co.*

The subjects very pleasantly and lucidly discussed are: Diagnosis, Urethral Structures, Hypertrophy of the Prostate, Retention of Urine, Extravasation of Urine and Urinary Fistulæ, Stone in the Bladder, Lithotrity, Lithotomy, Cystitis and Prostatitis, Diseases of the Bladder, Paralysis, Atony, Juvenile Incontinence, Tumors, Hæmaturia and Renal Calculus.

ON CHRONIC BRONCHITIS—ESPECIALLY AS CONNECTED WITH GOUT, ELPHYSEMA, AND DISEASES OF THE HEART. Being Clinical Lectures delivered at the Middlesex Hospital, by E. HEADLAM GREENHOW, M.D., Fellow of the Royal College of Physicians, Consulting Physician of the Western General Dispensary, &c., &c. One volume. Octavo. Price, \$2.25.—Chicago: *W. B. Keen & Co.*

MACKENZIE ON THE USE OF THE LARYNGOSCOPE IN DISEASES OF THE THROAT. SECOND EDITION, with additions, and an Essay on HOARSENESS, LOSS OF VOICE, and STRIDULOUS BREATHING in relation to Nervo-Muscular affections of the Larynx. Edited by J. SOLIS COHEN, M.D., and Illustrated by two lithographic plates, and fifty-one engravings on wood. Octavo. Price, \$3.00. Chicago: W. B. Keen & Co.

WYTHE'S PHYSICIANS' POCKET DOSE AND SYMPTOM BOOK.—
Eighth edition, 32mo., cloth. Price, \$1.00.
do do leather, with tucks and pockets, \$1.25. Chicago: W. B. Keen & Co.

CLEAVELAND'S PRONOUNCING MEDICAL LEXICON. A new and improved edition (the eleventh). Price, \$1.25. Chicago: W. B. Keen & Co.

Rush Medical College—Spring Announcement.

The Session will commence WEDNESDAY, March 3d, 1869, and continue to the 1st of July.

The Course will consist of daily lectures and recitation at the College, and Clinical observations in the Hospitals, Infirmarys, and Dispensaries of the City.

PROF. BLANEY will give instructions in Practical Chemistry, affording access for that purpose to the large and well-appointed Laboratory of the College.

PROF. POWELL will teach Surgery.

PROF. GUNN will conduct his Surgical *Clinique* at the College.

PROF. ROSS will conduct the Medical *Clinique* and instruct in Physical Diagnosis and Diseases of the Chest.

The County Hospital will afford two Medical and Surgical *Cliniques* each week.

The Marine Hospital will be open to students of the Course.

The Charitable Eye and Ear Infirmary is located near the College and will be open every day of the week for Clinical teaching, by E. L. Holmes, M. D., Lecturer on Disease of the Eye and Ear.

The College Dispensary will be open every day, affording to students an excellent opportunity for perfecting themselves in the art of diagnosis.

The Dissecting Room will be kept open during the entire session, and will be abundantly supplied with material for the study of Practical Anatomy.

Special instruction in Practical Chemistry will be given by Prof. Blaney, to such as desire.

Graduates of the College will be admitted to the Spring Session on the matriculation ticket. All others will be required to procure tickets.

Fees for the Spring Term—exclusive of Hospital and Demonstrator's Tickets—\$20.

Certificates of attendance upon the Full Course will be considered the equivalent of time passed under the instruction of a medical practitioner during the Spring and Summer months of the year.

For the Annual Catalogue of the College, and for additional information concerning the Spring Session,

Address

DR. E. POWELL, 45 S. Clark St.

Students arriving in the City are requested to call at once upon the Janitor, Mr. CHARLES KEIL, at the College Building, corner of North Dearborn and Indiana Streets, Chicago.